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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,419	07/11/2001	Helmut Nagele	18480.5	6919
7590 03/07/2005		EXAMINER		
Lichti Lempert & Lasch		MUSSEY, BARBARA J		
Bergwaldstr 1		ART UNIT		
Karlsruhe, D-76227		PAPER NUMBER		
GERMANY		1733		

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/830,419		NAGELE ET AL.	
	Examiner		Art Unit	
	Barbara J. Musser		1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/20/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-33,35-49 and 51-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-33,35-49 and 51-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 43-49 and 51-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 43, it is unclear whether the claim requires the fiber layer to be a woven, knitted, plaited, fleece, or interlacing fabric since it is dependent on claim 26 which requires such but it indicates in step c) that a fiber layer is disposed between the decorative layer and the carrier layer, without requiring the specific type of fiber layer. It is suggested that claim 43 be re-written in independent form including the specifics of the types of fabric required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 26-32, 35-49, and 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzell in view of Vaidya et al., any of Witman, Ochi et al., and Wagner, and Grimnes(U.S. Patent 5,569,344)

Hartzell discloses forming a composite body by pressing multiple overlapping layers of veneer into a wood substrate and bonding via an adhesive.(Pg. 2, ll. 13-40,65-70) It does not disclose a substrate containing natural and synthetic thermoplastic polymers. Vaidya et al. discloses that it is known in the art to replace wood with synthetic thermoplastic but that these materials are not bio-degradable.(Col. 1, ll. 21-25) The reference uses a mixture of natural and synthetic thermoplastics to form a replacement for synthetic thermoplastics.(Col. 3, ll. 1-4; Col. 4, ll. 46; Col. 6, ll. 4-43) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the material of Vaidya et al. as the substrate of Hartzell since it has better mechanical properties than wood but is still biodegradable unlike synthetic polymers.(Col. 1, ll. 21-25, 37-40; Col. 2, ll. 56-63) Overlapping is considered to mean that only parts of the two decorative layers lay on top of each other.

The references cited above use an adhesive to hold the wood substrate in the lignin. However, it is well-known in general in the bonding arts that thermoplastics are adhesive at high temperatures and that they can be used without additional adhesive layers are shown for example by any of Witman(Abstract), Ochi et al.(Abstract; Figures 3 and 4), and Wagner(Figure 6) which all disclose embedding a variety of material in thermoplastic without the use of adhesive. It would have been obvious to one of ordinary skill in the art at the time the invention was made to hold the wood veneer of Hartzell in place in the lignin containing plastic layer of Vaidya et al. without adhesive since Witman, Ochi et al., and Wagner show by a preponderance of the evidence that it

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is known in the bonding arts hold materials in thermoplastics without the use of adhesive.

The references cited above do not disclose a fabric layer between the decorative layer and the thermoplastic layer. Grimnes discloses forming a moldable structure with a decorative layer and fiber containing thermoplastic layers having a fabric layer between the decorative layers and the thermoplastic layers to prevent the thermoplastic from seeping through and damaging the decorative layer.(Abstract; Col. 10, ll. 16-30) It would have been obvious to one of ordinary skill in the art at the time the invention was made to place a fabric barrier layer between the thermoplastic and decorative layers of Hartzell, Vaidya et al., and any of Witman, Ochi et al., and Wagner since this would prevent the thermoplastic from seeping through the decorative layers and damaging them as taught by Grimnes.(Col. 10, ll. 16-30) Grimnes discloses the fabric layer can be a woven or knitted fabric.(Col. 14, ll. 10)

Regarding claim 27, Vaidya et al. discloses the substrate can contain lignin.(Col. 4; ll. 46)

Regarding claim 28 and 29, Vaidya et al. discloses a mixture of synthetic and natural polymers where the synthetic polymer can be polyethylene.(Col. 6, ll. 40-44)

Regarding claims 30, 31, 52 and 53, Vaidya et al. discloses prior art substrate could contain wood fillers.(Col. 1, ll. 42-45) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use wood filler in the article of Hartzell, Vaidya et al., and any of Witman, Ochi et al., and Wagner since it is well-

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known to use such fillers and extenders to decrease the amount of polymer used as shown by Vaidya et al.(Col. 1, ll. 42-45)

Regarding claim 35 and 36, the reference is silent as to the specific fibers used to make the barrier fabric. However, it does indicate the fibers reinforcing the thermoplastic can be cotton or wool.(Col. 9, ll. 45-46) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any conventional fibers to form the barrier fabric of Grimnes such as a natural fibers since the reference is silent as to the type of fibers and since Grimnes discloses using natural fibers and since Grimnes discloses that the barrier fibers should remain unaffected when the fabric is heated to liquefy the resin.(Col. 10, ll. 40-45)

Regarding claim 36, one in the art would appreciate that any type of plant fiber could be used as the fabric layer. Absent unexpected results, this is considered obvious.

Regarding claims 37-42, the uses of veneer are well-known in the wood-working arts. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the veneer surfaced material of Hartzell in any of the well-known products made with veneers since it would look the same but have better properties.

Regarding claims 40 and 42, using veneer substrates in furniture is well-known and conventional in the veneer arts.

Regarding claim 43, Hartzell discloses the veneer is pressed into the substrate.(Pg. 2, ll. 13-40)

Regarding claim 44, while the reference discloses placing the substrate on the press and the veneer onto the substrate, one in the art would appreciate that pressing the substrate into the veneer is an obvious alternative in the art.

Regarding claims 45 and 46, one in the art would appreciate that the pressure and temperature necessary to press the veneer into the substrate is dependent on the substrate and would choose the appropriate pressure and temperature based on the substrate. Only the expected results would be achieved.

Regarding claim 47, Hartzell discloses the veneer is pressed into the substrate until the layers are flush.(Pg. 2, ll. 34-39)

Regarding claim 48, one in the art would appreciate that the veneer layers could be pressed into the substrate less than their thickness when it was desired to have a raised pattern present. It would have been obvious to one of ordinary skill in the art at the time the invention was made to press the veneer layers into the substrate less than their thickness since this would leave a raised pattern, a decorative touch often desired in the woodworking arts.

Regarding claim 49, Hartzell discloses multiple pieces are pressed into the substrate and these pieces contrast with the substrate.(Pg. 1, ll. 60-65) One in the art reading the reference as a whole would appreciate that different kinds of wood could be used in the veneering to form designs with different colors and different grain patterns and would do so for that reason.

Regarding claim 50, embossing is a well-known technique in the decorative arts for adding detail to a design by creating raised and depressed areas in a layer to create

texture and detail. It would have been obvious to one of ordinary skill in the art at the time the invention was made to emboss the veneer pieces of Hartzell, Vaidya et al., and any of Witman, Ochi et al., and Wagner to create texture and detail in the final design as is known in the decorative arts.

5. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grimnes in view of Vaidya et al.

Grimnes discloses a thermoplastic-fabric composite containing a decorative fabric layer, a barrier fabric layer, and a fabric reinforced thermoplastic layer.(Col. 10, ll. 1-30) It is noted that the claims do not require the carrier to consist essentially of the thermoplastics. The reference does not disclose the substrate containing natural and synthetic thermoplastic polymers. Vaidya et al. discloses that it is known in the art that synthetic polymers are not biodegradable and that degradable polymers with the properties of plastics are needed.(Col. 1, ll. 21-25; Col. 2, ll. 56-60) The reference uses a mixture of natural and synthetic thermoplastics to form a replacement for synthetic thermoplastics.(Col. 3, ll. 1-4; Col. 4, ll. 46; Col. 6, ll. 4-43) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the material of Vaidya et al. as the substrate of Grimnes since it is biodegradable unlike synthetic polymers and will therefore reduce the disposal problem caused by synthetic polymers.(Col. 2, ll. 56-64) While the reference does not disclose overlapping fabric layers, overlapping layers to form a decorative design is well-known in general in the decorative arts and it would have been obvious to one of ordinary skill in the art at the

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time the invention was made to use two or more fabric layers and overlap them since this is known in general in the decorative arts as shown for example by sewing.

6. Claims 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzell, Vaidya et al., any of Witman, Ochi et al., and Wagner, and Grimnes as applied to claim 26 above, and further in view of Ogata et al.(U.S. Patent 4,911,969).

The references cited above do not disclose what the formed article is used for. The uses of products having veneer as an outer surface is well-known in the wood-working arts as shown for example by Ogata et al. which discloses a product with a wood pattern surface which can be used as flooring or wall materials or furniture.(Col. 1, ll. 6-12) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the product of Hartzell, Vaidya et al., and any of Witman, Ochi et al., and Wagner for any of the well-known uses of such decorative articles as shown for example by Ogata et al.(Col. 1, ll. 6-12)

Response to Arguments

7. Applicant's arguments with respect to claims 26-53 have been considered but are moot in view of the new ground(s) of rejection.

Regarding applicant's arguments that Valle does not teach a fiber layer between the thermoplastic and decorative layers, Grimnes does.

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Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara J. Musser whose telephone number is (571) 272-1222. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571)-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



BJM



**SAM CHUAN YAO
PRIMARY EXAMINER**